

Title (en)
Bone fixing device.

Title (de)
Knochenfixateur.

Title (fr)
Fixateur pour os.

Publication
EP 0420430 A1 19910403 (EN)

Application
EP 90309805 A 19900907

Priority
• JP 23327989 A 19890908
• JP 23328089 A 19890908

Abstract (en)
A bone fixing device (101, 102) is disclosed in which a single rod member (6, 116) is arranged in a longitudinal direction of a bone (4, 114), and at least two block members (8, 118a, 118b) are mounted on the rod member (6, 116) so that the block members may be fixed to any desired positions in the axial direction and around the axis of the rod member (6, 116). Pin holding mechanisms for holding a plurality of pins (5, 115) to be inserted into the bone (4, 114) are mounted on the block members (8, 118a, 118b), respectively. By the pin holding mechanisms, the pins (5, 115) are positionally adjustable around axes in the first and second directions (Y) and (Z) which are preferably perpendicular to the axial direction (X). Also, an actuator (138, 160) is fixed to the rod member (116). One of the block members (118a) slidable relative to the rod member (116) is moved in the axial direction relative to the rod member (116) to thereby impart elongation/contraction force to the bone (114). A detector (152) is fixed to the other block member (118b) and is brought into contact with a contact (150) located at an end of the rod member (116) to thereby detect the repulsive force from the bone (114).

IPC 1-7
A61B 17/60

IPC 8 full level
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CPC (source: EP US)
A61B 17/6458 (2013.01 - EP US); **A61B 17/66** (2013.01 - EP US)

Citation (search report)
• [X] EP 0024256 A2 19810225 - JAQUET ORTHOPEDIE [CH]
• [X] FR 2616059 A1 19881209 - SOREM SOC REALISA ELECT MEC [FR]
• [A] FR 2267080 A1 19751107 - MESSERSCHMITT BOELKOW BLOHM [DE]
• [XPD] JP H02180254 A 19900713 - NAGANO KEIKI SEISAKUSHO KK
• [YPD] JP H01308559 A 19891213 - LIFE TECH KENKYUSHO, et al
• [A] PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS, vol. 203, no. H2, April 1989, pages 91-96, Bury St. Edmunds, Suffolk, GB; G.J. VERKERKE et al.: "Design of a load cell of the Wagner distractor"

Cited by
DE19680799C1; US5788695A; AU696348B2; US6036691A; US5827282A; US5697165A; EP0450423A1; EP3167829A1; EP3170464A1; EP3173039A1; US7291148B2; WO9535062A3; WO9535061A3; WO9710766A1; WO9516402A1; WO9959490A1; US10010350B2; US11504160B2; US6409729B1; US10874433B2; US11723690B2; EP2349036B1

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